# METHOD AND SYSTEM FOR RESUME STORAGE AND RETRIEVAL BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The invention relates to a method and system for resume storage and retrieval from multiple resume warehouses. More specifically, the invention relates to a method and system to allow clients/recruiters to collect and organize job applicant information gathered from multiply resume warehouses.

## 2. <u>Description of the Related Technology</u>

Resumes are a primary communication medium between employers and job applicants. Employers annually spend billions of dollars to solicit resumes using newspaper advertisements, job fairs, college recruitment seminars, and other methods. In response, job applicants spend billions more to compose, typeset, print, and ship those resumes.

Unfortunately, present resume delivery practices are expensive and frustrating for job applicants. Employers and applicants suffer from the inefficiencies of resume collection and handling. The solicitation, receipt, storage, management, search, and retrieval of dozens, hundreds, and in some cases thousands of resumes can be a difficult, unwieldy, and expensive burden on the employer. Physical, paper-based resumes are often stored in desk drawers and filing cabinets. The numerous limitations of present resume practices include consumption of substantial physical space; difficulty in searching through large quantities of paper documents; the near-impossibility of correlating applicants whose resumes may vary widely in organization, content, and clarity; and the lack of

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uniformity in the search process from one practitioner to another.

The growing popularity of the Internet has created a niche in the resume distribution business for Internet resume warehouses (for example, Monster.com, Hotjobs.com, Dice) to improve the method of resume solicitation, sorting, delivery, handling, and management. In U.S. Patent No. 5,758,324 issued to Hartman et al. (incorporated by reference), a resume warehouse is described that allows a job applicant to fill out a resume outline form 30 (FIG. 3). The form 30 has a plurality of fields 31 relevant to employment, using typical information found on a resume is summarized by the applicant. Another resume warehouse is described in U.S. Patent No. 5,978,768 to McGovern et al. (incorporated by reference), which enables an employer to use a computer network, such as the Internet, to advertise available positions and receive resumes electronically from prospective applicants, and enables prospective applicants to use the Internet to find those available positions.

Therefore, a continuing need exists for a system which will maximize the scope of a company's advertising efforts while also providing a reasonably secure and efficient manner of forwarding resumes to the company and enabling the company to efficiently screen and categorize the resumes received. Additionally, a continuing need exists to assist a job seeker in locating available positions quickly and effectively.

#### **SUMMARY OF THE INVENTION**

From the above discussion, it is clear that a very significant need exists for an improved method of resume sorting, delivery, handling, and management.

The invention relates to a method and system for resume storage and retrieval from multiple

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resume warehouses. More specifically, the invention relates to a method to allow recruiters to collect and organize job applicant information gathered from multiply resume warehouses.

On-line resume warehouses have grown in popularity as a means to cut recruiting cost. Each warehouse has a different method for formatting the job applicant information. Currently, recruiters may print out resume of interest or cut and paste them into a word processing application. Since recruiters may be receive a large amount of resumes, the task of organizing and screening those resumes may be particularly burdensome and thus, a certain resume may be overlooked or mishandled. Furthermore, the electronic storage requirements may be overwhelming for a business technology resources.

The invention provides a method and apparatus for storage and retrieval of resume information from multiple resume warehouses.

The invention provides a method and apparatus for searching multiple resume warehouses for resumes and collecting information regarding the resume in a service providers database.

The invention provides a method of and apparatus for storage and retrieval of resume information in a manner which preserves the appearance, organization, and information content of the original document.

One embodiment of the invention provides a method of and apparatus for parsing the resume information and storing the resume information in a database.

One embodiment of the invention provides a method of and apparatus for computer-assisted searching of the resume information.

One embodiment of the invention provides a method of and apparatus for enabling the

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automatic and continuous execution of the searches through resume warehouses, thereby determining when a potentially qualifying applicant has entered their resume.

One embodiment of the invention provides a method of and apparatus for coordinating the parsing of resume information from multiple resume warehouses.

Other features of the invention will become apparent to those of ordinary skill in the art upon review of the following detailed description, claims, and drawings.

An object of the present invention is to provide a method and apparatus which enables an individual to search multiple on-line datebases for resumes from prospective candidates, and allows the individual to capture and efficiently organize and screen the capture resumes.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

| FIG. 1  | shows an embodiment of the invention      |
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| FIG. 2  | shows another embodiment of the invention |
| FIG. 3  | shows another embodiment of the invention |
| FIG. 4  | shows another embodiment of the invention |
| FIG. 5  | shows another embodiment of the invention |
| FIG. 6  | shows another embodiment of the invention |
| FIG. 7A | shows another embodiment of the invention |
| FIG. 7B | shows another embodiment of the invention |
| FIG. 8  | shows another embodiment of the invention |
| FIG. 9  | shows another embodiment of the invention |

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### FIG. 10 shows another embodiment of the invention

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 shows the a prior art on-line resume storage and retrieval system. An employer may link to a resume warehouse (for example, Monster.com, Hotjobs.com, Dice) and search the warehouse's database for resumes. Once the employer finds a resume that meets the required qualifications, the employer may print out a copy of the resume or electronically cut and paste the document into a word processor application. The resume may then be filed away or stored on the employer's computer system. This method has many disadvantages, such as the resumes must be manually organized and screened, the resumes require a large portion of the employers' computer resources for storage.

This method is inefficient even after the resumes are received by the company. For example, because the resumes must be manually organized and screened, a person in the company's recruitment or human resources department may need to spend a significant amount of time every day performing this task. Due to the large amount of resumes that may be received, the task of organizing and screening those resumes may be particularly burdensome and thus, a certain resume may be overlooked or mishandled. As a result, a candidate who is well suited for a position may never be considered.

Another disadvantage of the prior on-line resume storage and retrieval systems is a client/recruiter may utilize more than one resume warehouse. Each resume warehouse may have a different method or format for supplying an employer with job applicant information. The different

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methods or formats may make it difficult for an employer to import and manage the resume information from different resume warehouse sources. The present invention overcomes this disadvantage by providing a method and apparatus that allows employers to import and managing job applicant information from multiple resume warehouse.

Another disadvantage is prior systems do not provide an employer the ability to track the efficiency of each resume warehouse at generating potential job candidates. Currently, there is a need to track each resume warehouse to determine the number of resumes supplied to a client, the number of job candidates generated and the number of hires generated. Furthermore, the present invention may notify a client when a resume is already stored in the client's database located at the service provider's site. This will eliminate paying and storing for multiple copies of a resume. In addition, the present invention eliminates false efficiency counts for a resumes warehouses.

In an alternative embodiment, the method and apparatus may allow a client to accept resumes from a headhunter. The resumes submitted by a headhunter may be added to the client's database located at the service provider's site. A client may use the method and apparatus to track the productivity a headhunter. The present system may track a head hunter to determine the number of resumes supplied to a client, the number of job candidates generated and the number of hires generated. If a headhunter attempts to submit a resume to a client's database and the resume is already stored in the client's database located at the service provider's site, the system may automatically notify the client and/or headhunter that the resume exist and that no commission will be paid for the resume submission. This method reduces or eliminates any confusion regarding commissions paid to the headhunters. Since headhunters charge a substantial fee for their services,

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this is an important advantage of the present invention.

An overview of an embodiment of the present invention is illustrated in FIG. 2. This figure illustrates a relationship between computers 40 used by job applicants searching for employment positions; an employer, recruiter or company 41 having a computer 42 (it is understood that more than one employer, recruiter or company may use the present invention); a resume database 43; and a service provider 50. The resume database 43 may be maintained by a resume warehouse, which typically has contractual relationships with the employers, or companies 41 (may be a headhunter or recruiter). Each node in FIG. 2 (job seeker computer 40, company computers 42, resume warehouse 43 and service provider 50) is provided with suitable communication links and communications software so that they may communicate with each other.

Various possible types of communication links may be employed for the communication links between the nodes of Fig 2. For example, the communication link may comprise a hard wired connection, a telephone connection, a satellite RF, or other wireless connection, an Internet connection, a local area network or wide area network connection, a combination of the preceding, or any other desired type of connection. Different machines can connect using different types of communication links.

The computers may be workstations, desktop computers, laptop computers, mobile computers, PDAs, servers, clients, peers, uniprocessor or multiprocessor machines, embedded systems, and/or other computers. Suitable networks include local area networks, metropolitan area networks, wide area networks, the Internet, or any combination thereof. "Internet" as used herein includes variations such as a private Internet, a secure Internet, a value-added network, a virtual

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private network, a portion of the Internet such as the World Wide Web, or an intranet. If an Internet connection is used, some security precautions may be taken in an embodiment of the invention. For example, a secure servers or encryption methods may be used.

The operations performed by a company computer 42 running computer software according to an embodiment of the present invention will now be described. A diagram of a typical computer on which the present invention is implemented is shown in FIG. 3. Computer 10 usually includes keyboard 12, display device 14 and pointing device 16. Computer 10 has a program running thereon in accordance with the present invention. Display device 14 can be any of a number of different devices, such as a computer monitor employing a cathode ray tube (CRT) or touch screen. Pointing device 16 as shown in FIG. 3 is a mouse, although the invention is not so limited.

When a client connects to the service provider's web site, the service provider may display a screen requesting that the client enter his or her name, pseudonym, or the like, and password, which allows the client to interact with or "log-on" to the service provider's web site. In an alternative embodiment, the client is not required to log-on. Once a client has log-on, the service provider may display interactive screens that allow the client to perform desired tasks to administrate or facilitate the hiring process. The service provider 50 may provide the client's machine 41 with a web page allowing the client to select a resume warehouse for searching for job applicants. As shown in FIG. 4, the client may select an icon, as shown which consists of a very thin rectangular grey colored icon with the resume warehouse name used to represent a link. The invention is not limited by the size, shape or type of icon. The icon shown is for illustrative purposes only. By selecting the icon representing a resume warehouse, a client may link to the resume warehouse though the service

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provider's custom browser/client program. The service provider may provide automatic login features for the resume warehouses that require passwords. The client may then search for job applicants at the resume warehouse site. In this embodiment, the visual image of the resume warehouse web page may be persevered within the service provider's custom browser. The present invention eliminates any problems regarding the display of the resume warehouse's advertisement banners.

It is noted that the use of the term "selected" or its derivatives in this application refers to selection by manipulation of a mouse, depression of the "enter" key on a computer keyboard, activation of a touch screen, or in any manner as would readily be appreciated by one skilled in the art.

In an alternative embodiment, the service provider may provide a client with ability to search multiple resume warehouses with one search. A list of potential job candidates may be presented to the client. The list of job candidates may be hyperlink to the resume warehouse, which may store the resume information. A client may select a job applicant and the resume warehouse's web page, which houses the resume, will open up within the service providers web page (custom browser). This eliminates any problems regarding the display of the resume warehouse's advertisement banners. Another advantage of this embodiment, a client may quickly and efficiently search multiple resume warehouses.

A client may preform a search by known methods. The search may be preformed when a client submits a search form. The search form may include fields corresponding the job requirements.

After filling in a search form, the client sends the search form to the service provider/resume

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warehouse (e.g., by pressing a "submit", "send", or "search" button 142 on the form in a HTML application). This results in the client's machine providing a search request to the service provider/resume warehouse and initiating a search of the database. The computer running the resume screening software may then be controlled to search those resumes for various attributes, such as college degrees, prior experience, special qualifications, and the like. The computer may then provide a list of the most qualified candidates out of the entire collection of resumes. Furthermore, the client may enter information indicating that the "search agent" is to be a constant search agent which monitors post for new job applicants on, for example, a daily basis. This computerized screening and sorting method allows human resource personnel to devote more time to other tasks.

The system is capable of storing the client's search requests, and periodically later repeating the search (update searching). If the client desires the ability to store search requests and perform update searches, he or she will be required by the system to obtain a user name and/or password, so the client may be identified by the system in a subsequent connection session.

The system is also capable of suspending execution of a search request upon receiving a suspend request from the client, and of resuming the search at a later time upon receiving a resume request from the client. For example, the client may view the summary information for a certain number of "hits" (entries that satisfy the search parameters) and wish to take a break before more closely studying the results, or before looking at less relevant matches. Again, if the client desires the ability to suspend and later resume search requests, he or she will be required by the system to obtain a user name and/or password, so the client may be identified by the system in a subsequent connection session

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information for entries that satisfy the search parameters (search query). Preferably, contact information (e.g., name, address, phone number, e-mail, fax number, etc.) of qualifying applicants is suppressed at this stage. In one embodiment, the information presented to the employer for each entry that satisfies the search parameters is "summarized" information, for easy and quick review in a standardized, compact, format. Relevancy ranking may be performed in a preferred embodiment. The relevancy ranking identifies entries in the database that, while perhaps not perfectly matching the criteria specified in the search form, are substantially similar enough to be of potential interest to the employer.

Upon completing the search, client may be provided with an amount of the summary

The list of most qualified candidates may linked to a detail description of the applicant's qualifications as shown in FIG. 5 or an image of the resume may be displayed to the client. If the client wishes to obtain a copy of the resume, the client may click on the capture button shown in FIGS. 5 and 6. The capture button initiates an import application, which parses the resume data from the resume warehouse and collects the data for storage in the service provider's database. Once the data is parsed into the template, the client may chose to accept or decline the applicant information. In an embodiment of the invention, the client my edit the templet before accepting the information. An example of the service provider's templet for parsed job applicant information is shown in FIGS 7A & 7B. Each resume warehouse may have a different method for formatting the job applicant information. The present invention may be set up to parse the job applicant information from multiple resume warehouses. This method eliminates the client's need to have different storage methods for each resume warehouse. The data from all sources may be maintained in the service provider's

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database without any extra effort from the client. In an alternative embodiment, an image of the resume may be captured and stored in the database.

When importing the capture resume, the computer software may have the ability to determine the source resume warehouse and a parsing application for the source resume warehouse may be used. By tracking the source resume warehouse, the service may provide the client with the ability to determine the resume warehouse's productivity.

Once a resume has been selected, the client may manipulate the resume as desired. For instance, the client may rate or score the resume to indicate whether the applicant is suitable for the position. The score may appear next to the resume.

After a resume is captured, the job applicant information collected by parsing may be used to populate a database, which may be used to provide an automatic recruiting system. The job applicant information stored in the database may be used to generate form letters. The service provider may be configured to send a message to a prospective job applicant, such as a generate form letter. The message may include for example, the names of the positions and their corresponding companies. The message may be sent via e-mail, facsimile or regular mail. In an alternative embodiment, the service provider may be configured to automatically send an e-mail to the job seeker informing the job seeker that the resume has been received. The client may initiate a form letter to be send to a candidate by selecting the form from the service provider's web site. The service provider may provide the job applicant information to complete the form letter. For example, a letter, such as a form rejection letter may be imported from a database into the e-mail message prior to transmission. In addition, a selected resume may be e-mailed to anyone with an Internet e-mail address.

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In another embodiment, the client may determine where the application may be filed (stored). This may be decided when the job applicant information is capture. The client may store the captured resume in relation to the open positions for which the job applicants are applying. For example, if the job applicant is applying for a position as a cold fusion developer, the resume may be stored in a file which relates to that cold fusion developer position. As shown in FIG.8, the folder for the cold fusion developer position contains six resumes. The client may view the resumes received for the cold fusion developer position by selecting the "6" hyperlink under the "# of resumes". The resumes may listed by name of applicant or by a relevancy rank. The client may view a summary of the job applicant's qualifications or an image of the resume. The foldering process may be alter or change at any time by the client. Restrictions or user rights may used to provide control and security for the database.

Furthermore, the client may manually delete a selected resume. Alternatively, the client may configure the service provider to automatically delete a resume after a selected period of time from receipt (e.g., 180 days), or to save the resume indefinitely if desired.

In an embodiment of the present invention, the client may create a new job position or manage an existing position. The service provider may display an interactive screen for the client to control and perform certain operations which are described below. The service provider may allow a client to open a new position, edit the position, deactivate or delete a position.

In an embodiment of the present invention, the service provider may limit the options/features provided to a client based on the agreement between the service provider and the client using the system. For example, if the company has not enable certain features of the resume tracking system,

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the service provider may not activated the feature which would instruct the program to allow the client to use that feature. Also, if the company has only paid the service provider to use the system and method to track a certain number of job openings or for certain amount of time, the service provider may prevent the client from using the service if the amount has been exceeded.

If the client indicates that a job position is to be added for tracking, the service provider may display a screen for the client to enter information pertaining to the position for which an applicant is being sought. For example, the screen display may include a form in which the client may enter the title of the position, the category of the position, a brief description of the position, and a detailed description of the position. This information may be used to inform people who review the resumes in the client's company of the qualifications requirements.

When the client enters the information, the service provider may store that information at a location in memory pertaining to that position which can be accessed with reference to that position. That information can also be stored with respect to the particular client within the company. Once the client has submitted the information the display screen will display a message indicating, for example, that the information has been received and stored. The information may be manipulate at anytime by a client with the proper authority. When the client indicates that the editing has been completed a message indicating that the information has been received and stored may be displayed.

The service provider may allow the client to track the status of job openings. For example, the service provider may provide the client with statistics regarding the client's open job positions. For example, the number of captured resumes for each position may be provide to the client and clicking the hyperlink the client may view the resumes collected for the position.

If a position becomes filled or the company is no longer interested in hiring a person for that position, the position can be deactivated manually by the client. Alternately, the service provider may be instructed to deactivate the position automatically based on information (e.g., the dates during which the position is to be active) entered by the client. The resumes stored in the deactivated folder may be archived or deleted.